

# Industry 4.0 and how do emerging countries leapfrog from Industry 2.0 to Industry 4

Group 5

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**Developing Countries still stay at industry 2.0, and  
lack of the core resource for developing industry 4.0**



**Lack of  
Infrastructure**



**Lack of  
human  
resource**



**Lack of  
Investment**

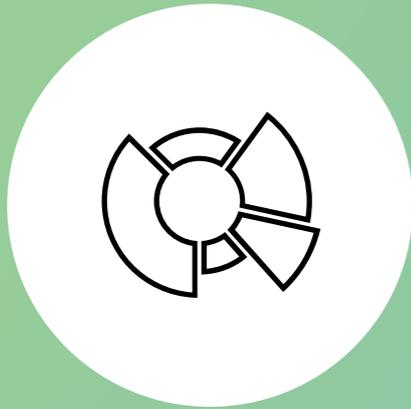
**But there is potential for poorly-developed country to leapfrog into 4th industrial revolution with worldwide knowledge and emerging technology**

**Knowledge Transfer without geographical restrictions**

**Localizable emerging technology which is flexible on infrastructure**

**We choose Kenya's tea industry as a concrete example to explore how can we use the knowledge and technology to achieve leapfrog effect**

# Key Insights



There is a lack of diversity of Kenya's tea



Farmers feel powerless and disheartened



The resource in community do not be used effetely



Tea specialist value unique tea sourcing for their own brand

## Opportunity Statement

How might we create greater diversity in specialist tea products in Kenya, with more effective use of data and technology, so as to improve the cost competitiveness and quality and create more value in comparison to other tea producing countries?

How might we capture that value for Kenyan farmers and their communities while taking into account the limitations of infrastructure, financial and social capital?

## **Service Proposition**

**To help farmers grow different tea leaf and processing in suitable way**

**To develop peer to peer and mentor support for individual farmers**

**To empower the famers on decision making in the value chain and develop their own brand**

Agri+



**Soil Sensors**



**Knowledge Network**

## The soil sensor will support farmers' farming task through the information

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Use sensors to measure and monitoring the soil and environment of farmers's land, helping farmer to treat their land correctly basic on the tea leaves they are growing, such as what fertiliser they need, when do they need water their land and what is the best time to pick their leaves

**The data record from the sensor can certificate the quality of farmers' tea leaves and help factory to classify them for different processing method**

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The staff in factory's buying centre can access to the database of Agri+ to check the grow record of the tea leaves, and support them to know to quality of leaves and most suitable processing method

**The knowledge network will connect the experts in the community with government, market and research centre, so they can be knowledge enough to guide farmers to build their brands**

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The experts in tea community can access to Agri+ to know the growing situation of each farmer, also the related policy from government, tea drinking trend from market and new founding from research centre, so that they can help farmers on planing and connect their tea with market.

**Combine the soil sensors and knowledge network to a support system for helping the farmers collaborate with each other and create their own tea brand.**

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Agri+



**Soil Sensors** for supporting farmers's task and certificate the quality of their tea leaves

**Knowledge Network** for boosting knowledge transfer and developing peer to peer support and mentor lead tea community

- How can we make the soil sensor come true?
- The fibre-optic sensors in **FOSS4 Irrigation!**



Soil Sensor



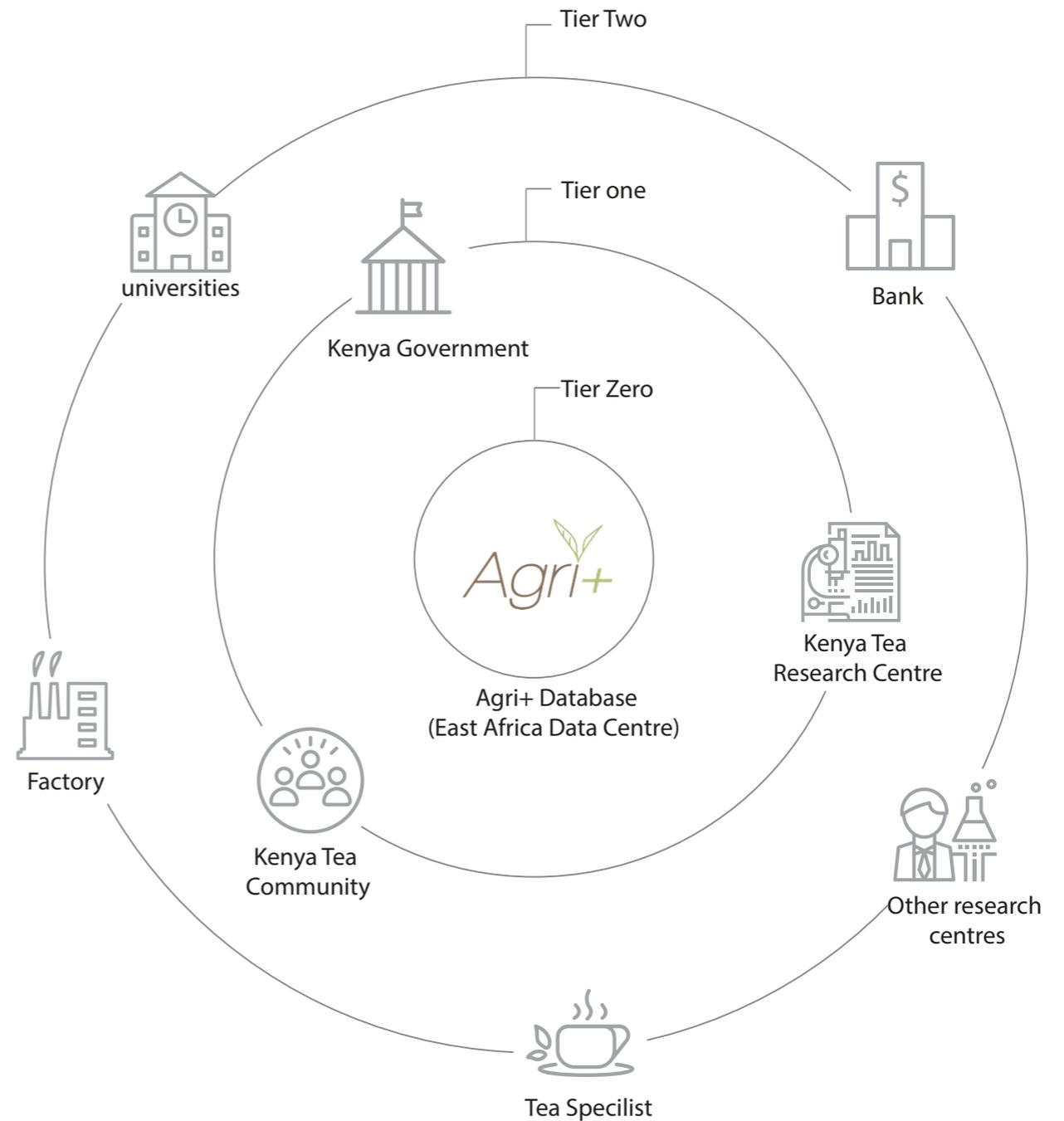
**FOSS4 IRRIGATION: HOW CAN HIGH ENERGY PHYSICS HELP WITH WATER SHORTAGE?**

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- How can we make the knowledge network come true?
- The concept of **Worldwide LHC Computing Grid!**

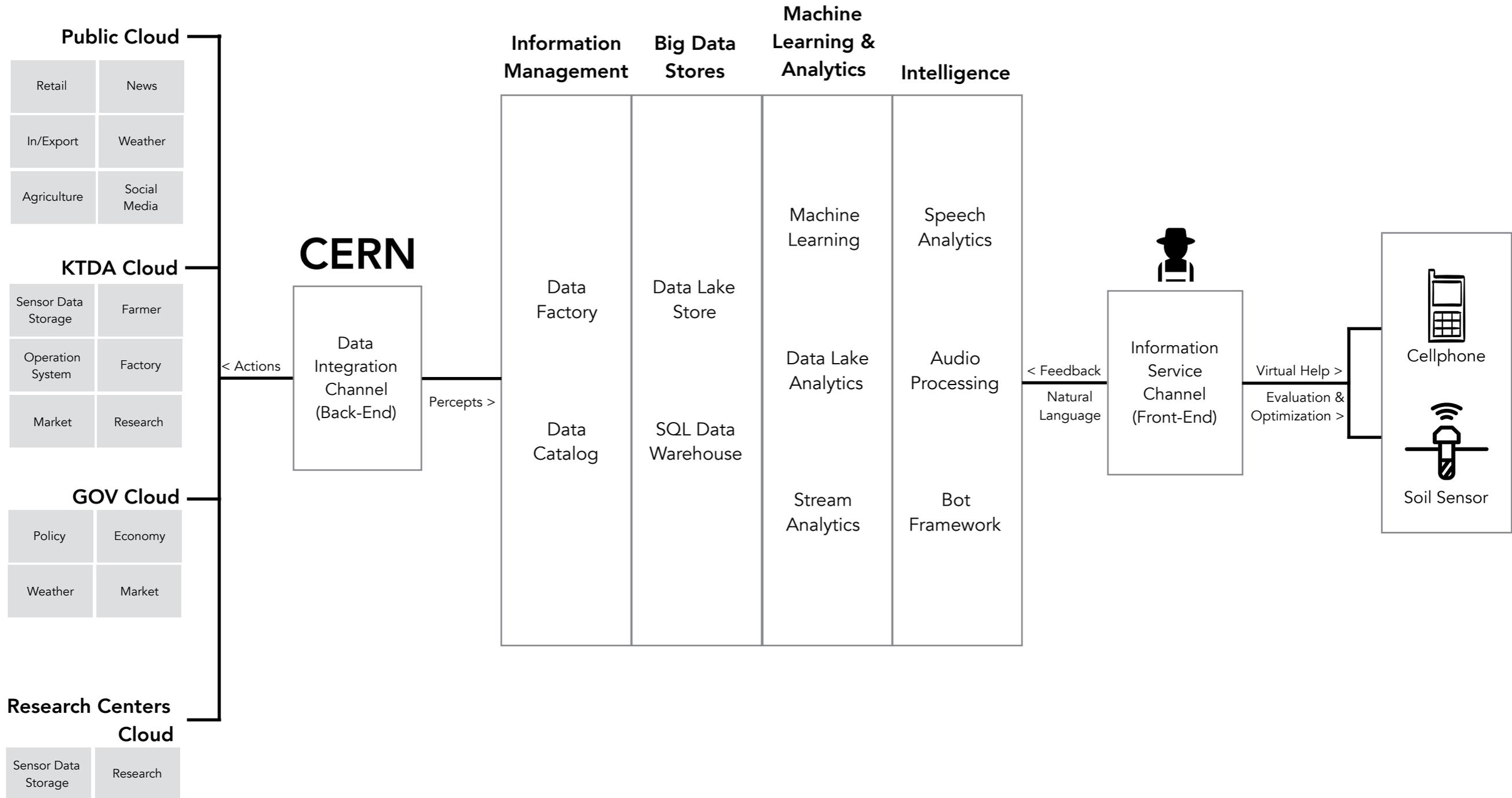


**Knowledge Network**



Tire zero: store the data  
 Tire one: Access and analysis the data  
 Tire Two: view the data

# Agri + Platform



**If you are interested in our project or know anyone who might interested in, please don't hesitate to come to our meeting at CERN IdeaSquare on 4-5 Dec.**

